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**BADGER'S
METALLIC
FIRE PROOF
WINDOW FRAME
& SASH**



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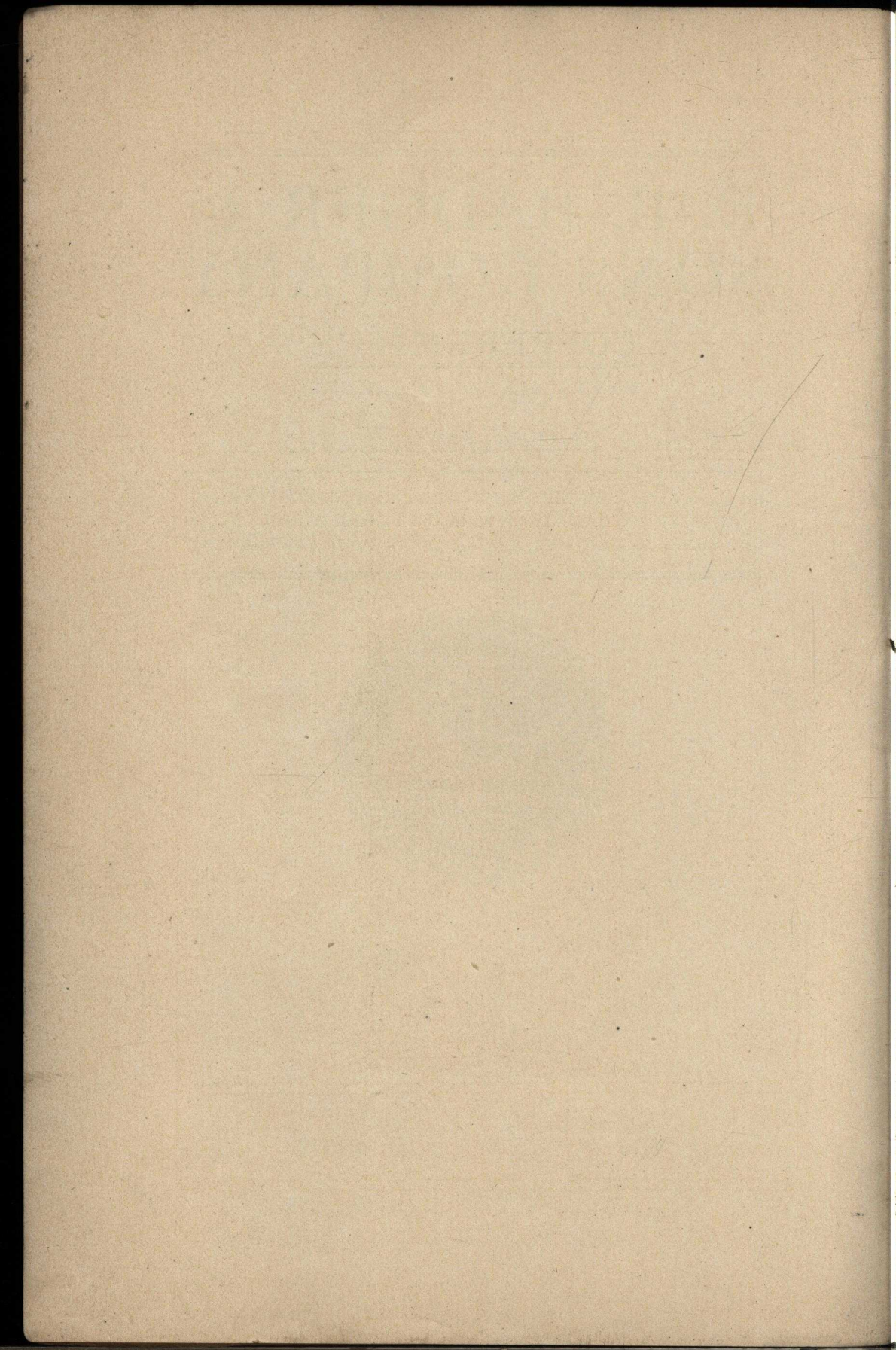
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SHEET METAL WORKERS

63, 65, 67, 69 PITTS STREET, BOSTON, MASS.

BADGER'S PATENT METALLIC FIRE-PROOF WINDOW FRAME
AND SASH · BADGER'S FIRE EXTINGUISHER, METAL
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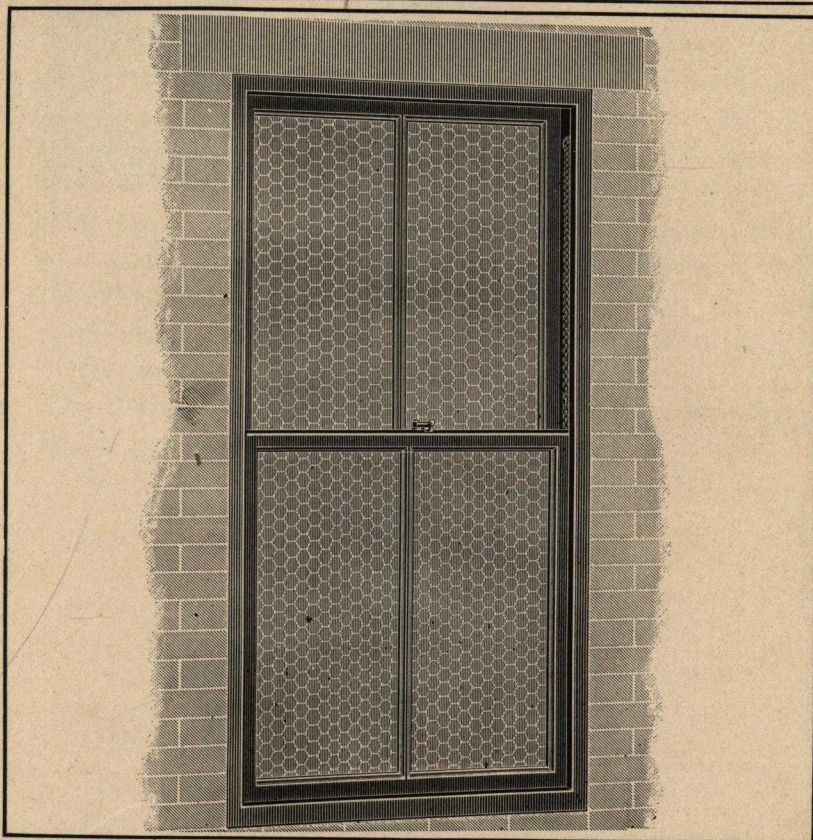




BADGER'S

METALLIC FIRE-PROOF WINDOW FRAME & SASH

Adopted by THE BOSTON BOARD
OF FIRE UNDERWRITERS



E. B. BADGER & SONS COMPANY
63, 65, 67, 69 PITTS ST., BOSTON, MASS., U.S.A.

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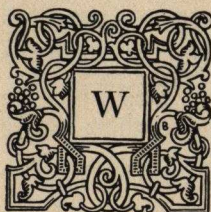
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BADGER'S

METALLIC FIRE-PROOF WINDOW FRAME & SASH

Introduction —



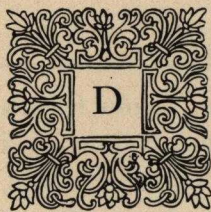
WE take pleasure in presenting to our friends and patrons, and all who may be interested in the fire-proof construction of buildings, this small pamphlet on *Fire-Proof Metallic Window Frames and Sashes*. We have endeavored to produce the simplest form of window that can possibly be made, and after over a year of experimental work, in which much time and thought have been expended, would present for your inspection the result of our labor, and leave you to judge of its results.

The construction of our window is thoroughly covered by letters patent.



BADGER'S METALLIC FIRE-PROOF

Badger's Patent Metallic Fire- Proof Window Frames and Sashes



URING the past year the attention of property owners has been called to the value of metallic window frames and sashes used in connection with wire glass as an absolute preventive against the spread of fire. This fact has been brought to their notice particularly by the various Boards of Fire Underwriters, who are constantly advocating their use.

Shutters have generally been accepted as the best means of preventing the spread of fire, but have been found to have many disadvantages which are obviated by the metallic window. On the following pages are a few of the advantages which cannot but be recognized as facts worthy of consideration in relation to the use of metallic window frames and sashes.

That the Underwriters allow the same reduction of rates by their use is of itself important, as lower rates are what property owners are constantly looking for. The following is a concise statement as made by the Boston Board of Underwriters as to reduction of rates, and also their indorsement of our window.

WINDOW FRAME AND SASH

*Copy of Letter received from the
Boston Board of Fire Underwriters*

Boston, Jan. 20, 1900.

Messrs. E. B. BADGER & SONS, 63 Pitts St., Boston.

Gentlemen,—The question of the use of wire glass in approved metal frames came before the Committee on Tariff at a meeting last March, and the following recommendation by them to the full Board was acted upon at the Board meeting.

“Where wire glass is used in approved frames made entirely of metal in buildings occupied for other purposes than for manufacturing or for storage stores, warehouses, or stores for the storage and sale of merchandise, the same allowance in rate will be made as if the openings were protected by shutters. This rule shall also apply to such parts of buildings occupied for mercantile or manufacturing purposes as are from their construction certain not to contain merchandise or other inflammable contents. In other parts of buildings used for mercantile or manufacturing purposes, the allowance for wire glass in approved metal frames will be one-half that made for standard shutters.”

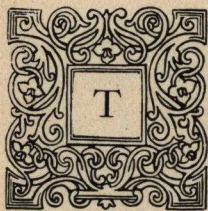
Under the above rules, I have the pleasure to notify you that the metal frame made by you, and shown by you to me this day, is an approved frame.

Yours very sincerely,

F. E. CABOT, *Asst. Sec'y.*

BADGER'S METALLIC FIRE-PROOF

Some of the Advantages of the Metallic Window Frame & Sash



THEY are absolutely fire proof, if properly constructed, when glazed with wire glass.

They are shut nine times where shutters are closed once.

The window can be closed in an instant, whereas shutters require some skill and time.

They admit light and shutters keep it out, thus giving access to the warehouse at all times without the labor of opening the shutters.

Fire can be seen through a window when nothing is likely to be known of it inside a building when the shutters are closed.

Metal sashes never swell nor warp, and are sure to work the same in all changes of the atmosphere.

X Metallic frames and sashes, when painted, cannot be distinguished from wood, and admit of a very smooth finish.

Wire glass in approved metallic frames and sashes will give you 10% reduction in insurance rates in many cases, 5% in others.

They are weather proof.

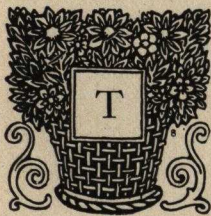
The weights cannot stick, as there are nothing but metal guides for them to run in.

No projecting nails or splinters.

To gain access to a building on fire through the window with shutters closed is next to impossible, but with metallic frames and sashes the window can be broken with a good stroke of a fireman's axe.

WINDOW FRAME AND SASH

Illustrations & Explanations



THE following cuts and explanations we trust will be self-explanatory.

We manufacture only two classes of windows,—those with movable sash, and those with stationary.

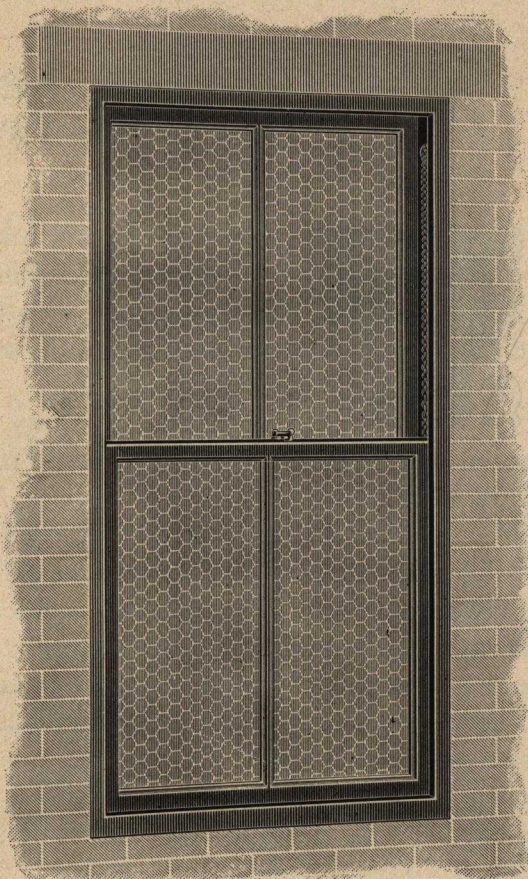
The double windows we would recommend only in special cases where extra protection from fire is required.

We are aware that there are windows being constructed with fusible links to drop of their own weight if left open when a fire strikes them. We have not included them in our manufacture, as they are complicated, liable to get out of order, and are needed only in very special cases.

The only window on which a fusible link is used is the stationary window with the balanced transom which is held open by a chain, and closes of itself when the link is melted. This is simple and requires no special mechanism.

BADGER'S METALLIC FIRE-PROOF

Metallic Window Frame and Sash



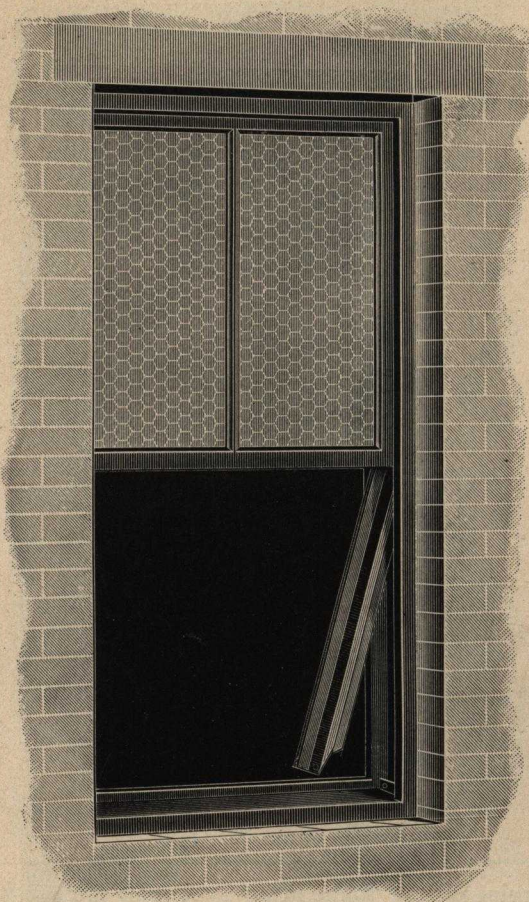
This cut represents
a Metallic Window
Frame and Sash as
it appears when
completed.



HE appearance of this window is the same as that of any ordinary wooden window frame and sash with the exception of the wire glass. The shape of both frame and sash is the same as that of the wooden window, and can be made in any style to suit the building where it goes.

Badger's Metallic Fire-Proof
Window Frame and Sash
Patented June 5, 1900

WINDOW FRAME AND SASH



Window with
lower sash raised

This cut represents the window with the lower sash raised, showing the lower half of guide partly removed and the manner in which the weights are reached.

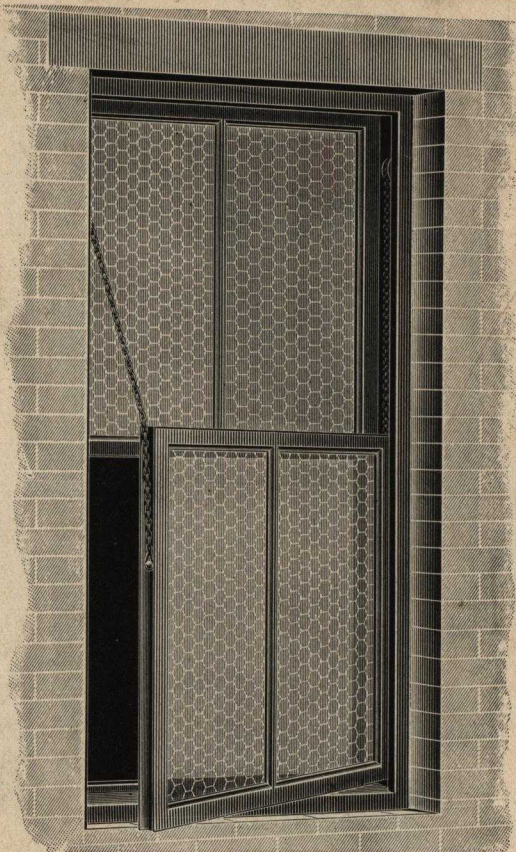


IN the above cut the partition between the weights is shown on the removable section, thus giving free space in which to handle and adjust the weights. This removable section is kept in place by two buttons at the bottom end as shown, the upper end being held in place by dovetailing into the stationary frame. By the removal of the section on the lower half of the frame, the lower sash is easily removed, as shown in the cut on the following page.

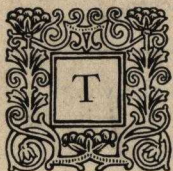
Badger's Metallic Fire-Proof
Window Frame and Sash
Patented June 5, 1900

BADGER'S METALLIC FIRE-PROOF

Window Frame
with lower guide
removed



This cut represents a window frame with the lower guide on the right side removed and the manner in which the lower sash is taken from the frame.

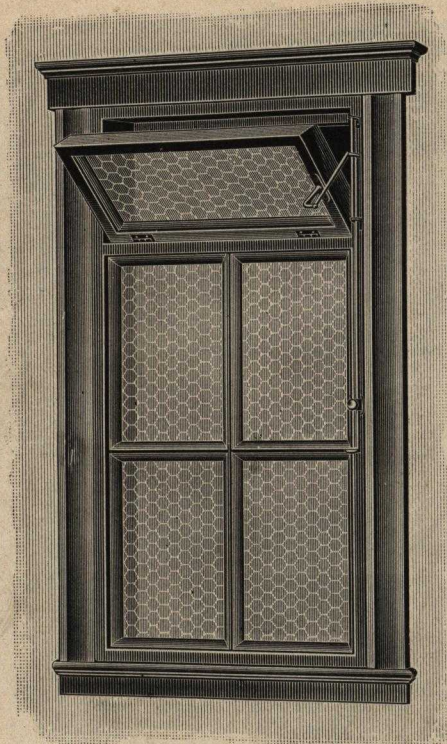


THE opening in the frame being as long as the sash and as wide as the two sashes, the sash is easily pushed into the opening and the other side of sash is brought by the front bead and is thus clear of the frame. In this window there are no screws or bolts of any kind to be removed, no beads to be taken off, and therefore no parts to get out of order or lost. *The only removable part* is the lower half of the guide on the frame, and this is held in place by *buttons that cannot come off*.

The glass is put into the sash by removing a sliding cap on the top, which requires no screws or bolts to hold it in place, and the glass is dropped into place.

We know of no simpler construction than that here represented. For further detail of construction see page 17.

WINDOW FRAME AND SASH



Stationary Sash and
Frame with Transom
at top

This cut represents a stationary sash and frame with a transom in the top part.



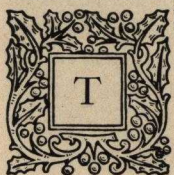
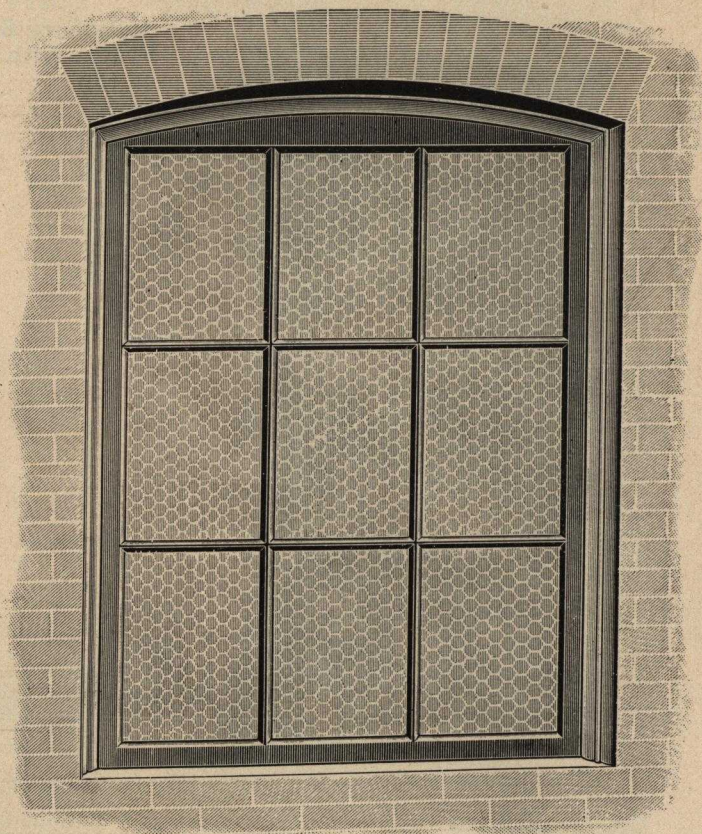
THE above cut, representing a stationary sash and frame with transom overhead, is shown merely for convenience. The stationary window would be more generally made without the transom. These stationary windows can be made of any size, to suit the position where they may want to be placed.

Badger's Metallic Fire-Proof
Window Frame and Sash
Patented June 5, 1900

BADGER'S METALLIC FIRE-PROOF

Patented, June 5, 1900

Stationary
Sash and
Frame no
part of
which opens

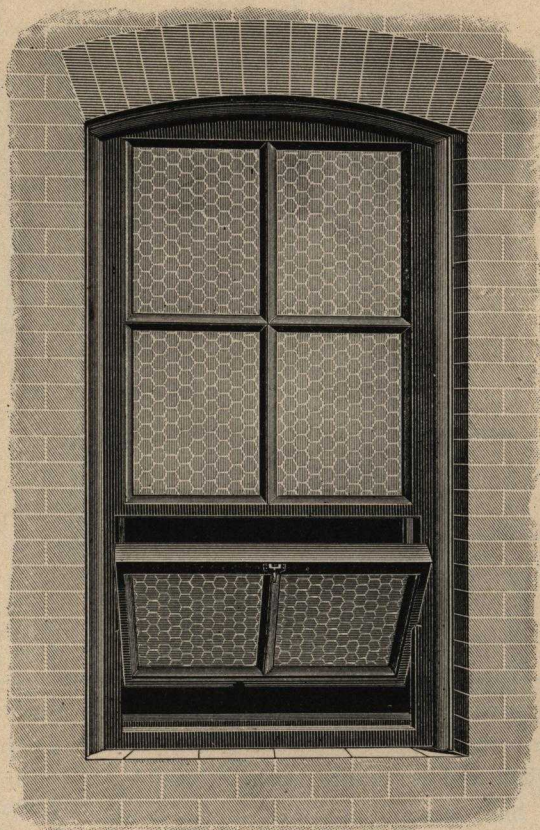


THE above cut represents a complete stationary window frame with glass set in place. No portion of this window opens, and its use is simply for fire protection, allowing light to enter a building where none otherwise would, were the walls solid.

Badger's Metallic Fire-Proof
Window Frame and Sash
Patented June 5, 1900

WINDOW FRAME AND SASH

Other patents pending



Stationary
Sash and
Frame with
balanced
Transom so
arranged as to
shut itself
when fire
strikes it



HIS cut represents a stationary window frame with a balanced transom sash which can be used either at the top or bottom of the window. The transom is so made that to keep it open a chain is used with a fusible link attached, and when heated to 160° would sever connection and cause window to close of its own weight, the window being weighted on the lower part. The transom is also constructed so that it can be readily removed.

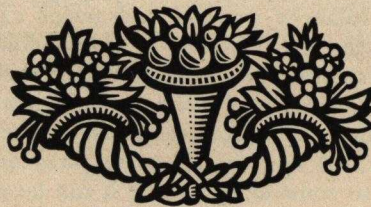
BADGER'S METALLIC FIRE-PROOF

Patented, June 5, 1900

Metallic Frame
with pivoted Sash
Water-Proof and
Fire-Proof



THE above cut represents a metal frame with a movable sash pivoted on centres. This is a very convenient and serviceable sash. The lower centres are ball bearing, and it is easily worked, giving ample opportunity for ventilation in hot weather.



WINDOW FRAME AND SASH

Other patents pending

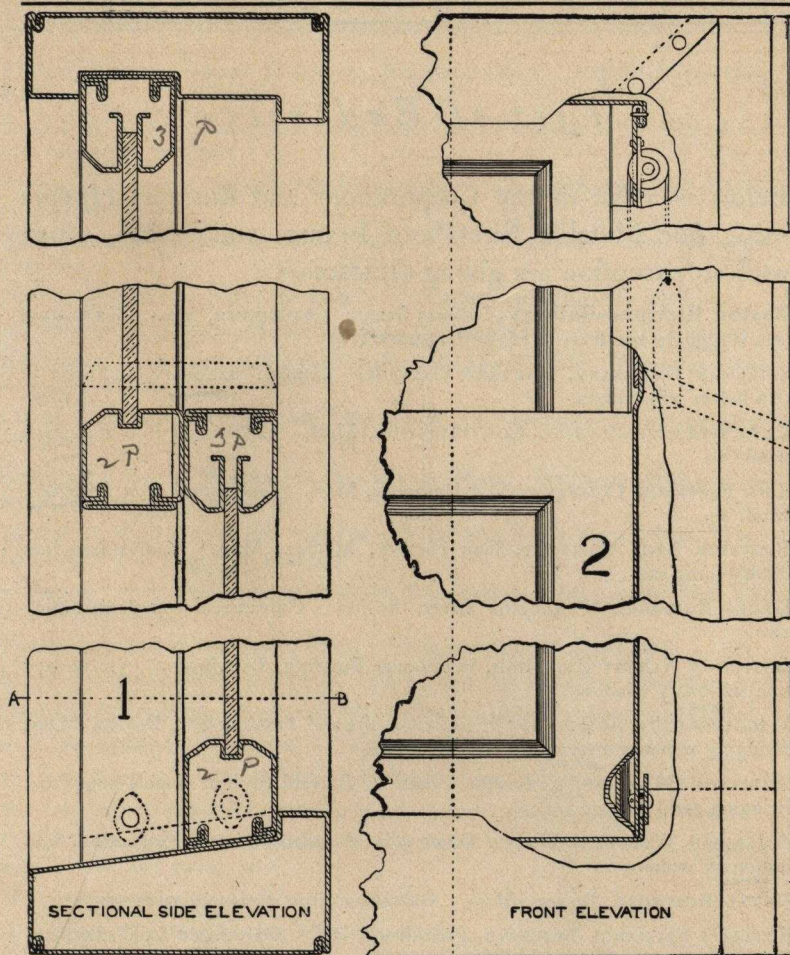


Diagram No. 1. — Sectional side elevation of window, showing construction of sash and frame.
Diagram No. 2. — Sectional front elevation, showing weights, pulleys, and arrangement of sash for getting at weights.

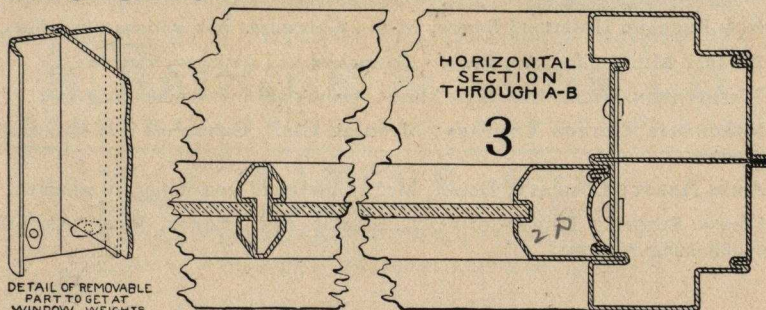


Diagram No. 3. — Horizontal section through A-B on Diagram No. 1, showing further construction of frame and sash. The small diagram shows detailed construction of arrangement for detachable section of frame to allow of reaching weights and for adjustment and removing of sash.

28 Stationary 1111111111111111 31
 4 Pivoted 1111 4
 10 Hinged 11111 10
 1

L I S T O F E N D O R S E R S

List of Endorsers

Below is a list of the Corporations and Business Houses using our Metallic Fire-Proof Frames and Sashes, which without exception are giving satisfaction.

- 5 **Boston Elevated Railway**, Sullivan Square, Charlestown, Mass. Galvanized iron stationary windows. **15,000 square feet.**
- 5 STILLMAN INFIRMARY, HARVARD COLLEGE. Copper, stationary, and open in two halves with hinges.
- 5 CURTIS MANUFACTURING CO., Worcester, Mass. Galvanized iron stationary windows.
- 5 THE HAMPTON COMPANY, East Hampton, Mass. Galvanized iron stationary windows.
- ROBINSON BROS. COMPANY, Soap Factory, Malden, Mass. Galvanized iron double-hung sash.
- GLOBE BUILDING, Washington Street, Boston. Galvanized iron double-hung sash.
- 5 BOSTON & ALBANY RAILROAD, Warehouse Building, East Boston. Galvanized iron stationary windows.
- WIGGLESWORTH BUILDING, corner Devonshire and Franklin Sts., Boston, Mass. Swinging sash and stationary.
- STILLINGS' WAREHOUSE, Boston Wharf. Galvanized iron double-hung and swinging sash.
- 5 AMERICAN WALTHAM WATCH COMPANY, Waltham, Mass. Galvanized iron stationary windows.
- HOTEL ROSSMORE, Boston, Mass. Galvanized iron stationary windows.
- BUTLER'S EXCHANGE BUILDING, Providence, R. I. Galvanized iron stationary and pivoted sash.
- OLD BLACKSTONE BANK BUILDING, Boston. Galvanized iron stationary windows.
- NEW ENGLAND HOSPITAL, Boston, Mass. Galvanized iron stationary windows.
- ASSABET MILLS, Maynard, Mass. Galvanized iron stationary windows.
- WASHINGTON MILLS, Lawrence, Mass. Galvanized iron double-hung sash.
- MERCHANTS' COTTON COMPANY, Montreal, Can. Galvanized iron stationary windows.
- AMOS ABBOTT COMPANY, Dexter, Me. Galvanized iron stationary windows.
- EDISON ELECTRIC LIGHT COMPANY, Atlantic Ave., Boston, Mass. Copper double-hung windows.

LIST OF ENDORSERS—Continued

EDISON ELECTRIC LIGHT COMPANY, Bumstead Court. Copper double-hung sash.

TALLASSEE FALLS MANUFACTURING COMPANY, Tallassee, Ala. Galvanized iron stationary windows.

COLONIAL THEATRE, Boston, Mass. Galvanized iron double-hung and stationary windows.

TITUS-SHEARD COMPANY, Little Falls, N.Y. Galvanized iron stationary windows.

NO. 11 CLINTON ST., Boston, Mass. Galvanized iron stationary windows.

MUSEUM OF FINE ARTS, Boston, Mass. Galvanized iron stationary windows.

AMOSKEAG MANUFACTURING COMPANY, Manchester, N.H. Galvanized iron stationary windows.

QUEEN CITY COTTON COMPANY, Burlington, Vt. Galvanized iron stationary windows.

SCHWARZ'S STORE, Washington St., Boston, Mass. Galvanized iron, double-hung and stationary windows.

DENNISON MANUFACTURING COMPANY, Factory at South Framingham, Mass. Galvanized iron stationary windows.

BUILDING corner Portland and Sudbury Sts., Boston, Mass. Galvanized iron double-hung sash.

PEMBERTON MILLS, Lawrence, Mass. Galvanized iron stationary sash.

METHUEN MILLS, Methuen, Mass. Galvanized iron stationary windows.

HOWARD PURINGTON, Waterville, Me. Galvanized iron stationary windows.

F. P. SHELDON, Providence, R.I. Galvanized iron stationary windows.

NO. 161 HIGH ST., Boston, Mass. Galvanized iron stationary windows.

NO. 160 COMMERCIAL ST., Boston, Mass. Galvanized iron stationary windows.

COSMOPOLITAN STABLE, Pitts St., Boston, Mass. Galvanized iron, stationary, double-hung and swing sash.

WATERBURY AMERICAN, Waterbury, Conn.

AMERICAN WOOLEN MILLS, Maynard, Mass.

CHASE MANUFACTURING COMPANY, Waterbury, Conn.

AND many others space will not allow us to print.

For prices and further particulars, apply to
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PATENTEES AND SOLE MANUFACTURERS

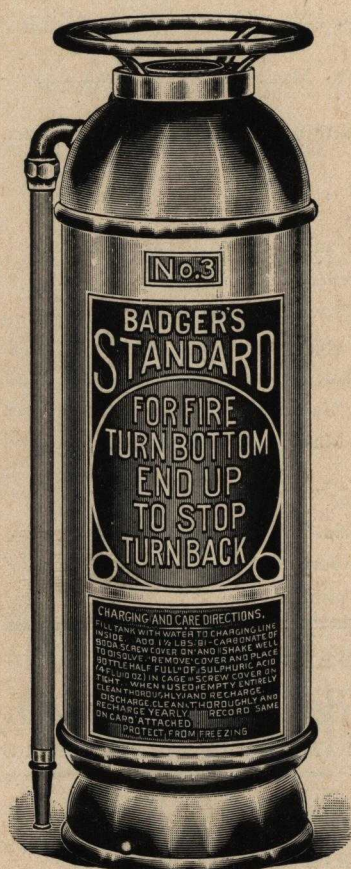
W. E. TAYLOR, Agent
604 WITHERSPOON BUILDING
PHILADELPHIA, PENNSYLVANIA
Agent for Philadelphia, Baltimore, and Washington

BADGER'S FIRE EXTINGUISHER

PATENTED AUGUST, 1900 · NOVEMBER, 1901

In the line of Fire Protection we offer below the most approved form of Fire Extinguisher on the market, for the protection of all classes of property.

Endorsed by the New England Insurance exchange.



TO OPERATE, TURN
BOTTOM UP; TO
STOP, TURN BACK

ANY CHILD TWELVE YEARS
OLD CAN OPERATE THEM

FULL NICKEL
EXTINGUISHER \$16.00

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AND LITERATURE, APPLY TO

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